

1. For cervical spine injuries, neurosurgery consult is preferred, especially if there are neurological deficits; neurosurgeons practice at other hospitals which are level 1 trauma centers and are very comfortable dealing with injuries of the entire spine.

2. Reminder about mandatory surgeon consult within 18 hours of presentation to our ED or arrival to our hospital if direct admission (although these should not be intentionally be accepted as a direct admission, they should be transferred to our ED instead):

- hemothorax or pneumothorax
- pelvic fractures (not isolated rami fractures)
- two or more adjacent rib fractures
- pulmonary contusion
- significant fall (>15 feet, >65 years old and fall from elevation or down stairs, pediatric <10 y.o. fall from >2x patient's height).

It wasn't in the meeting, but I would add spine fractures, although some of them ED has to activate trauma team within 30 minutes.

For reference, our website has the trauma consult requirements posted.

3. Cervical collar management (this is mostly for inhouse falls/rapid responses, or if they come with it from ED):

a) indications for hard cervical collar placement after blunt trauma:

- cervical spine pain
- neurological deficits
- high-energy mechanism
- inability to evaluate the patient following trauma (e.g. intoxicated or other significant impairment of the level of consciousness or cognition)
- ? age

b) indications for cervical collar removal:

- able to evaluate (i.e. awake, normal LOC, not intoxicated) and
 - exam without cervical spine tenderness on midline palpation, no pain on axial ROM, no other neurological deficits;
- but if one of the above is present, then order CT cervical spine for C-spine evaluation

c) after imaging:

- CT shows cervical spine injury -> continue C-collar and obtain neurosurgery consult (or spine surgery, but neurosurgery is probably preferred)

- CT is without cervical spine injury:

if awake and neuro intact:

no pain -> remove collar

pain -> continue collar, obtain MRI of the cervical spine or obtain flexion/extension XR

if obtunded -> I would discuss with a surgeon, but options are: continue collar until normal LOC (but if it takes a while, C-collar-related complications can occur), or MRI of cervical spine, or just remove collar based on negative CT (e.g. if intubated/immobile, they can have collar removed and nursing staff should follow spine precautions, which I am told is the protocol at HCMC and neurosurgery here is ok with it) - there was a meta-analysis that showed that in such patients (obtunded, negative C-spine CT) 0% had unstable fracture on subsequent MRI, but 9% had a stable fracture; the meta-analysis had limitations.

If someone has a stable C-spine fracture and needs to wear a C-collar as treatment for a while (e.g. 12 weeks), usually a hard collar is placed first (Miami or Philly) and gets quickly changed to an Aspen (softer) collar. Winkley Orthotics will fit patients 7 days a week during business hours.

4. Needle decompression for pneumothorax (this is mostly for ED providers, for us it's just FYI):

- traditional approach was 2nd intercostal space in the midclavicular line
- newer proposed approach: 4th or 5th intercostal space in the anterior axillary line